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(54) Easy opening package

(57) A package comprises a sealed bag (1; 31; 41; 61; 71; 81; 91; 101) which is formed from impermeable sheet material having an inner surface and an outer surface. The bag (1; 31; 41; 61; 71; 81; 91; 101) defines an interior for reception of the package contents and has a closed bottom end (6; -) and an openable end longitudinally separated from the closed bottom end (6; -). The interior of the bag (1; 31; 41; 61; 71; 81; 91; 101) is closed at the openable end by a peelable seal (10; 47) extending substantially transversely across the bag (1; 31; 41; 61; 71; 81; 91; 101) and formed by peelably sealing an inner surface of a first portion of the sheet material to an inner surface of a second portion of the sheet material. Moreover the bag (1; 31; 41; 61; 71; 81; 91; 101) is provided with first and second tabs (23, 24; 50, 51; 72, 73; 82, 83; 92, 93; 102, 103) exterior to the peelable seal (10; 47) and formed integrally with the first and second portions respectively. The first and second tabs (23, 24; 50, 51; 72, 73; 82, 83; 92, 93; 102, 103) are each further provided with digital grip enhancement means (25; 32; 52; 62) to enhance gripping of the first tab (23; 50; 72; 82; 92; 102) between a thumb and an opposed finger of one hand of a person and gripping of the second tab (24; 51; 73; 83; 93; 103) between a corresponding thumb and opposed finger of the other hand of the person thereby to facilitate opening of the package.

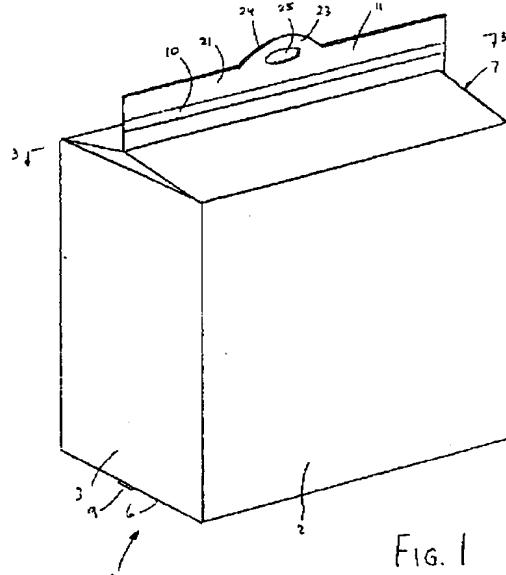


FIG. 1

Description**BACKGROUND OF THE INVENTION****FIELD OF THE INVENTION**

[0001] This invention relates to a package, more specifically a package for a food product, such as roast and ground coffee.

DESCRIPTION OF THE PRIOR ART

[0002] Food products, such as roast and ground coffee, are often sold in packages in the form of a sealed bag made from gas and liquid impermeable sheet material. Often the contents of the bag are sufficient for use upon more than one occasion. Accordingly, in order to retain the food product in optimum condition for as long as possible after opening, the bag has a closed bottom end and an openable top end which is closed by a transverse peelable seal formed by peelably sealing opposed areas of the inner surface of the sheet material one to another at the openable end of the bag. Such a bag can be opened by pulling free end portions of the sheet material apart at the openable end of the bag thereby to cause separation of the opposed areas one from another in order to enable the contents, or more often a part only of the contents, of the package to be removed. If a resealable peelable adhesive is used the bag can be resealed by pressing the opposed areas together again in order to retain the remaining product in as fresh a condition as possible until the next occasion upon which it is desired to use the food product.

[0003] In order to facilitate opening of such packages a pair of tabs may be provided at the openable end as described in US-A-5352466. Such tabs are exterior to the peelable seal and are intended to be grasped each between a thumb and an opposed forefinger of a respective hand of person wishing to open the package for access to its contents. By grasping the two tabs firmly, one in each hand, and drawing them apart the operation of opening of the sealed package is facilitated.

[0004] The impermeable sheet material is normally smooth because this tends to give a desirable glossy appearance to the package. However, the use of a sheet material with a glossy finish can make opening of the package difficult because a person wishing to open the package cannot, due to the glossy finish, exert a sufficient grip upon the tabs to be able to separate them to break the peelable seal, particularly upon the first occasion when the package is opened.

[0005] In addition it can be difficult to separate one tab from another in readiness for opening the package.

SUMMARY OF THE INVENTION

[0006] It is an object of the present invention to provide an improved package for a food product, such as

roast and ground coffee in the form of a sealed bag having a peelable seal at its openable end. It is a further object of the present invention to provide a package including a bag which is more readily opened. It is yet a further object of the invention to provide a package which is provided with a peelable seal across its openable end with tabs which can be readily grasped by a person wishing to open the package. Still further it is another object of the invention to provide a sealed package in the form of a bag to whose contents access is possible via a peelable seal at its openable end with tabs that it is readily possible to grasp and separate for the purpose of opening the bag.

[0007] A package according to the invention comprises a sealed bag which is formed from impermeable sheet material having an inner surface and an outer surface. The bag defines an interior for reception of the package contents and has a closed bottom end and an openable end longitudinally separated from the closed bottom end. The interior of the bag is closed at the openable end by a peelable seal extending substantially transversely across the bag and formed by peelably sealing an inner surface of a first portion of the sheet material to an inner surface of a second portion of the sheet material. Moreover the bag is provided with first and second tabs exterior to the peelable seal and formed integrally with the first and second portions respectively. The first and second tabs are each further provided with digital grip enhancement means to enhance gripping of the first tab between a thumb and an opposed finger of one hand of a person and gripping of the second tab between a corresponding thumb and opposed finger of the other hand of the person thereby to facilitate opening of the package.

DETAILED DESCRIPTION OF THE INVENTION

[0008] According to the present invention there is provided a package comprising a sealed bag which is formed from impermeable sheet material having an inner surface and an outer surface and which defines an interior for reception of the package contents, wherein the bag has a closed bottom end and an openable end longitudinally separated from the closed bottom end for access to the contents of the package, wherein the interior of the bag is closed at the openable end by a peelable seal extending substantially transversely across the bag and formed by peelably sealing an inner surface of a first portion of the sheet material to an inner surface of a second portion of the sheet material, wherein in the bag is provided with first and second tabs exterior to the peelable seal and formed integrally with the first and second portions respectively, and wherein the first and second tabs are each provided with digital grip enhancement means to enhance gripping of the first tab between a thumb and an opposed finger of one hand of a person and gripping of the second tab between a corresponding thumb and opposed finger of the other hand

of the person thereby to facilitate opening of the package and access to the contents thereof.

[0009] In such a package said first tab may be laterally offset on the closed end of the bag from the second tab along the length of the peelable seal.

[0010] In one form of package according to the invention said digital grip enhancement means comprises a plurality of holes punctured through the thickness of the respective tab. In this case each of the first and second tabs may be provided with a plurality of holes punctured through the thickness of the respective tab.

[0011] Alternatively said digital grip enhancement means may comprise at least one aperture punched through the thickness of the respective tab, said aperture being of a size sufficient to enable contact of the skin of the thumb with the skin of an opposed finger of a person when the respective tab is grasped therebetween. The first and second tabs may each be provided with at least one aperture punched through the thickness of the respective tab, said aperture being of a size sufficient to enable contact of the skin of the thumb with the skin of an opposed finger of a person when the respective tab is grasped therebetween.

[0012] The bag can be without gussets in which case the peelable seal can extend transversely across substantially the entire width of the openable end of the bag from one side to the other. In addition the closed bottom end of the bag can be formed without gussets and sealed by a transverse bottom seal which extends transversely across substantially the entire width of the bottom end of the bag from one side to the other.

[0013] Alternatively the openable end can be formed with gussets and the peelable seal formed between respective areas of the inner surfaces of opposed portions of sheet material.

[0014] The bag can comprise a length of sheet material formed into a tube and sealed along a longitudinal fin seal.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] In order that the invention may be clearly understood and readily carried into effect, some preferred embodiments thereof will now be described, by way of example only, with reference to the accompanying diagrammatic drawings wherein:

- Figure 1 is a perspective front view of a first form of sealed package in accordance with the invention;
- Figure 2 is a rear perspective view of the package of Figure 1;
- Figure 3 is a cross section on the line 3 - 3 of Figure 1;
- Figure 4 is a perspective front view of a second embodiment of the invention;
- Figure 5 is a perspective view of part of a further package in accordance with the invention;
- Figure 6 is a cross section on the line 6 - 6 of Figure

5;

Figure 7 is a front perspective view of yet another embodiment of the invention;

Figures 8 and 9 are perspective front views of further embodiments of the invention; and

Figures 10 and 11 are partial front perspective views of still further forms of sealed package constructed in accordance with the invention.

10 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0016] Referring to Figures 1 and 2 of the drawings, a first form of sealed package made in accordance with the invention comprises a sealed bag 1 of the so-called monobag type. Such a bag is made of a barrier sheet material and is filled with appropriate contents, such as a food product, e.g. roast and ground coffee. The barrier sheet material is preferably a synthetic plastics material such as a printed laminate 100 µm thick consisting of a layer of polyethylene terephthalate, a layer of low density polyethylene, and a layer of peelable polyethylene, with the peelable layer on the inside of the bag 1. The bag 1 has a front wall 2, side walls 3 and 4, a rear wall 5, a gusseted bottom end 6, and a gusseted top end 7 which together define an interior for the contents (not shown). Access to the interior of the package can be achieved through the top end 7 of the bag 1 as will be explained further hereafter.

[0017] Bag 1 can be formed from a length of barrier sheet material by passing it around a suitable former so as to impart a tubular shape to it and then heat sealing it longitudinally so as to form a longitudinal fin seal 8 (see Figure 2). An appropriate length of the thus formed tubular shape can be formed into a gusseted bag with a transverse bottom fin seal 9 and an open top. After filling the open bag 1 with an appropriate measured quantity of a food product, such as roast and ground coffee, the top of filled the bag 1 can then be sealed in any suitable manner by heat sealing or by application of a peelable adhesive so as to form a peelable seal 10. Before the bag 1 is sealed at its openable end it may be evacuated. A tamperproof indicator may be incorporated in peelable seal 10 so as to provide a visible indication of any attempt to open the package having been made before selection and purchase by a customer. If desired, the adhesive can be a resealable peelable adhesive.

[0018] In Figure 3, which shows the peelable seal 10 in cross section, the thickness of the barrier sheet material has been greatly exaggerated. The peelable seal 10 is formed between opposed inside faces of the panels 11 and 12 in the central area of the peelable seal 10 as indicated in Figure 3 and, in the gusseted region, between opposed inside faces of the panel portions 13 and 14 and of the panel portions 15 and 16, as well as between the contacting faces of the panel portions 17 and 18. Care has to be taken that the peelable seal is com-

plete in the regions 19 and 20 in order to achieve an airtight seal, particularly if the package is vacuum packed.

[0019] As can further be seen from Figures 1 and 2 peelable seal 10 is positioned below the top end of bag 1 and so there is an unsealed area 21 on panel 11 above peelable seal 10 and a corresponding unsealed area 22 on panel 12. Integrally formed with these unsealed areas are corresponding tabs 23 and 24. The purpose of tabs 23 and 24 is to facilitate opening of the sealed package by enabling a consumer to grasp each tab 23 or 24 between an opposed thumb and finger, e.g. a forefinger, and then to open the package by pulling the tabs 23 and 24 apart so as to peel peelable area 10 apart along its length to permit access to the contents of the package. In order to ensure that, in so doing, the consumer does not inadvertently lose his or her grip upon the tabs 23 and 24, each of them is provided with a corresponding digital grip enhancement means in the form of an aperture 25 which is sufficiently large to allow the skin of the consumer's thumb to contact the skin of the opposed finger as the consumer grasps the tab 23 or 24.

[0020] Having extracted from the opened package sufficient of its contents for the time being, the consumer can thereafter re-close the bag by pressing the areas of the bag together again corresponding to the peelable seal 10.

[0021] Figure 4 shows a second embodiment of the invention comprising a bag 31 which is generally similar to bag 1 of Figures 1 to 3. Accordingly like reference numerals have been used in Figure 4 to indicate like parts to those of bag 1.

[0022] Bag 31 differs from bag 1 in that, in place of the apertures 25, the tabs 23 and 24 are provided with an alternative form of digital grip enhancement means, i.e. a number of punched apertures 32 formed by needle punching or the like. In the course of needle punching a certain roughness is created on the surface of the tab 23 or 24 opposite to that from which the needle pierces the corresponding tab 23 or 24 due to displacement of material of the tab 23 or 24 above the surface of thereof by the needles used for piercing. This surface roughness enhances the frictional force that can be exerted on the tab 23 or 24 by an opposed thumb and finger.

[0023] Figure 5 is a front perspective view of the top part of a third form of package comprising a bag 41 of the so-called "bag-in-bag" type. A cross section of bag 41 is shown in Figure 6; as with Figure 3, the thickness of the barrier sheet material is greatly exaggerated in Figure 6. The bottom end (not shown) of the bag 41 is sealed in conventional manner.

[0024] Bag 41 has a front face 42, a rear face (not shown), a left side face 43, and a right side face (not shown). The top face 44 of bag 41 is extended on each side to form wings 45 and 46. A peelable seal 47 extends across the entire width of the bag 41 and is formed between corresponding areas of the layers 48 and 49 of barrier sheet material. Above peelable seal 47 the layers

48 and 49 are extended by tabs 50 and 51, in which are formed apertures 52, similar to apertures 25 of the bag 1. For the sake of clarity the bag 41 has been depicted with the tabs 50 and 51 having been pulled slightly apart.

[0025] As can be seen from Figure 6 the rear side of bag 41 has a fin seal 53.

[0026] In Figure 7 there is shown a further form of package in accordance with the invention. This is generally similar to the package of Figures 5 and 6 and so like reference numerals have been used to indicate like parts. This package comprises a bag 61 and differs from that of Figures 5 and 6 in that, in place of apertures 52, the tabs 50 and 51 are each needle punched as indicated at 62.

[0027] Figure 8 illustrates yet another embodiment of the invention which includes a bag 71 which is generally similar to the bag 1 of Figures 1 to 3. Bag 71 differs from bag 1 in that the tabs 72 and 73 are laterally offset one from another across the transverse dimension of the bag 71. The apertures 25 are, however, still positioned centrally transversely with respect to the peelable seal 10. With this arrangement there is a visible ear 74 on tab 73 and a corresponding 75 on tab 72 whose left hand edge is defined by the right hand edge 73' of tab 73. These ears 74 and 75 make it more apparent to the consumer that the line of sealing 10 is peelable and that the bag 71 can be opened by pulling tabs 72 and 73 apart.

[0028] Bag 81 of the package shown in Figure 9 is similar to bag 31 of the package of Figure 4. As with the package of Figure 8, the difference between bags 31 and 81 is that the tabs 82 and 83 are slightly laterally offset one from the other so as to form an ear 84 on tab 83 and also a corresponding ear 85 whose laterally inner edge is defined by the right hand laterally outer edge 83' of tab 83. The purpose of ears 84 and 85 is to make it more readily apparent to a consumer that the seal 10 is peelable and that the way to open the package is to pull the tabs 82 and 83 apart.

[0029] In the package of Figure 10 the bag 91 is generally similar to the bag 41 of Figure 5 except that the tabs 92 and 93 are slightly laterally offset one from another so that they have ears 94 and 95 to facilitate opening of the package. Ear 95 is bounded along its left hand edge by the right edge 93' of tab 93.

[0030] Figure 11 shows a still further package constructed in accordance with the invention. This comprises a bag 101 which is generally similar to bag 51 with the exception that the tabs 102 and 103 are laterally offset one from another by a small amount so as to form ears 104 and 105. The left hand edge of ear 105 is formed by the right hand edge 103' of tab 103. The ears 104 and 105 make it more readily apparent to a consumer that the bag 101 can be opened by grasping the tabs 102 and 103 and pulling them apart to open the peelable seal 47.

[0031] An example of a peelable adhesive consists of ethylene-vinyl acetate (EVA), with magnesium silicate

as additive. Typically the peelable adhesive consists of about 10 to 20% by weight magnesium silicate and the remainder ethylene-vinyl acetate, for example a composition comprising 15% magnesium silicate and 85% ethylene-vinyl acetate. For further details of such an adhesive reference should be made to US-A-4488647.

[0032] Other laminate materials from which a bag can be made include a 4-ply structure which consists of an aluminium foil layer or ply, a polyethylene inner layer or ply, a nylon intermediate layer or ply, and a clear polyester outer layer or ply. Other materials which may be used include a laminate which consists of a layer or ply of polyvinylidene chloride coated cellophane or like material laminated to a polyethylene layer or ply. Such materials are also disclosed in US-A-4488647.

Claims

1. A package comprising a sealed bag (1; 31; 41; 61; 71; 81; 91; 101) which is formed from impermeable sheet material having an inner surface and an outer surface and which defines an interior for reception of the package contents, wherein the bag (1; 31; 41; 61; 71; 81; 91; 101) has a closed bottom end (6; -) and an openable end longitudinally separated from the closed bottom end (6; -) for access to the contents of the package, wherein the interior of the bag (1; 31; 41; 61; 71; 81; 91; 101) is closed at the openable end by a peelable seal (10; 47) extending substantially transversely across the bag (1; 31; 41; 61; 71; 81; 91; 101) and formed by peelably sealing an inner surface of a first portion of the sheet material to an inner surface of a second portion of the sheet material, wherein the bag (1; 31; 41; 61; 71; 81; 91; 101) is provided with first and second tabs (23, 24; 50, 51; 72, 73; 82, 83; 92, 93; 102, 103) exterior to the peelable seal (10; 47) and formed integrally with the first and second portions respectively, and wherein the first and second tabs (23, 24; 50, 51; 72, 73; 82, 83; 92, 93; 102, 103) are each provided with digital grip enhancement means (25; 32; 52; 62) to enhance gripping of the first tab (23; 50; 72; 82; 92; 102) between a thumb and an opposed finger of one hand of a person and gripping of the second tab (24; 51; 73; 83; 93; 103) between a corresponding thumb and opposed finger of the other hand of the person thereby to facilitate opening of the package and access to the contents thereof.
2. A package according to claim 1, wherein said first tab (72; 82; 92; 102) is laterally offset on the closed end of the bag (71; 81; 91; 101) from the second tab (73; 83; 93; 103) along the length of the peelable seal (10; 47).
3. A package according to claim 1 or claim 2, wherein said digital grip enhancement means comprises a plurality of holes (32; 62) punctured through the thickness of the respective tab (23, 24; 50, 51; 82, 83; 102, 103).
4. A package according to claim 3, wherein each of the first and second tabs (23, 24; 50, 51; 82, 83; 102, 103) is provided with a plurality of holes (32; 62) punctured through the thickness of the respective tab (23, 24; 50, 51; 82, 83; 102, 103).
5. A package according to claim 1 or claim 2, wherein said digital grip enhancement means comprises at least one aperture (25; 52) punched through the thickness of the respective tab (23, 24; 50, 51; 72, 73; 92, 93), said aperture (25; 52) being of a size sufficient to enable contact of the skin of the thumb with the skin of an opposed finger of a person when the respective tab is grasped therebetween.
6. A package according to claim 5, wherein each of the first and second tabs (23, 24; 50, 51; 72, 73; 92, 93) is provided with at least one aperture (25; 52) punched through the thickness of the respective tab (23, 24; 50, 51; 72, 73; 92, 93), said aperture (25; 52) being of a size sufficient to enable contact of the skin of the thumb with the skin of an opposed finger of a person when the respective tab (23, 24; 50, 51; 72, 73; 92, 93) is grasped therebetween.
7. A package according to any one of claims 1 to 6, wherein the bag (41; 61; 91; 101) is formed without gussets and the peelable seal (47) extends transversely across substantially the entire width of the openable end of the bag (41; 61; 91; 101) from one side to the other.
8. A package according to claim 7, wherein the closed bottom end (6; -) of the bag (41; 61; 91; 101) is formed without gussets and is sealed by a transverse bottom seal which extends transversely across substantially the entire width of the bottom end (6; -) of the bag (41; 61; 91; 101) from one side to the other.
9. A package according to any one of claims 1 to 6, wherein the openable end (7) is formed with gussets and wherein the peelable seal (10) is formed between respective areas of the inner surfaces of opposed portions of sheet material.
10. A package according to any one of claims 1 to 9, wherein the bag (1; 31; 41; 61; 71; 81; 91; 101) comprises a length of sheet material formed into a tube and sealed along a longitudinal fin seal (8; 53).

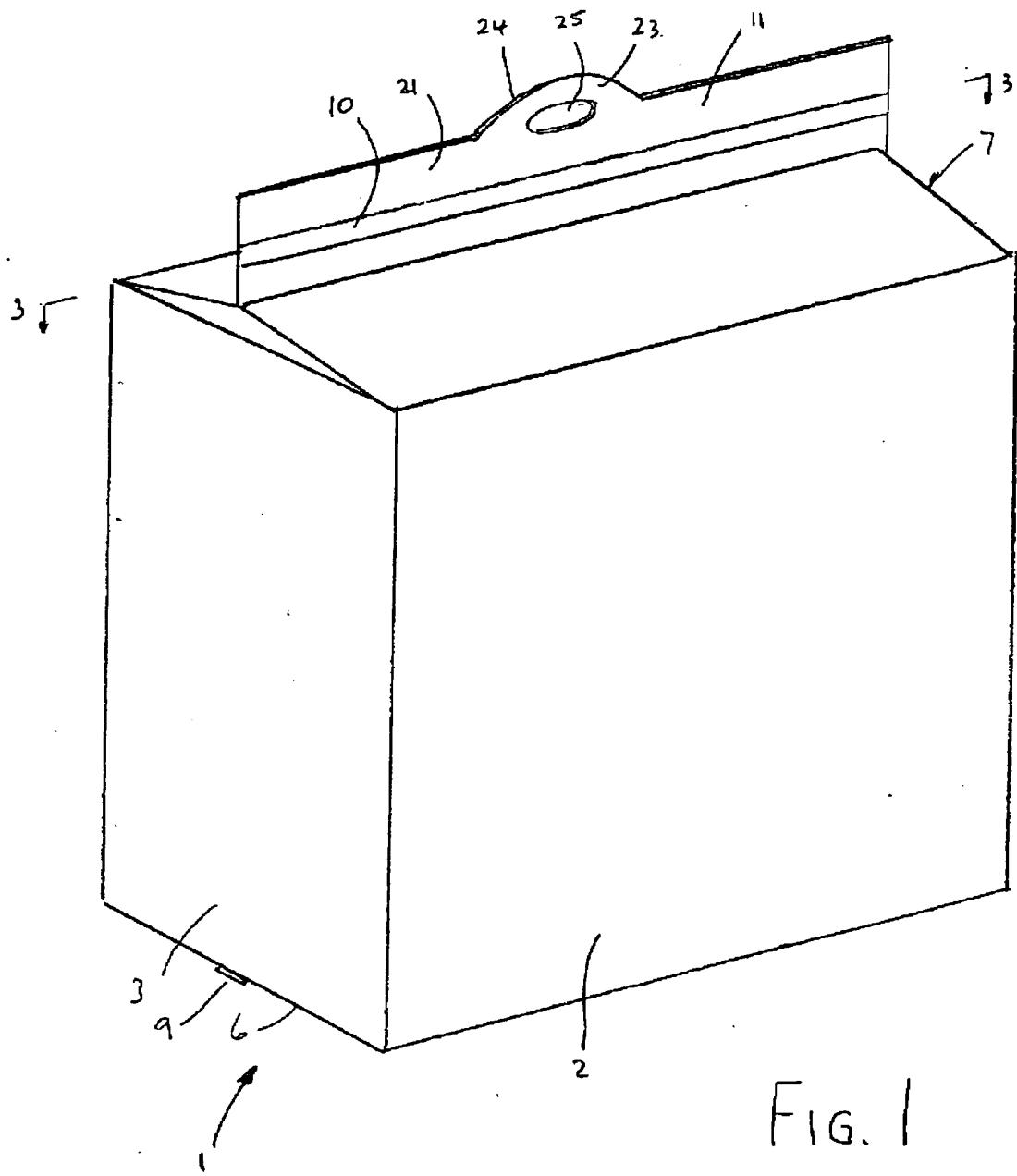
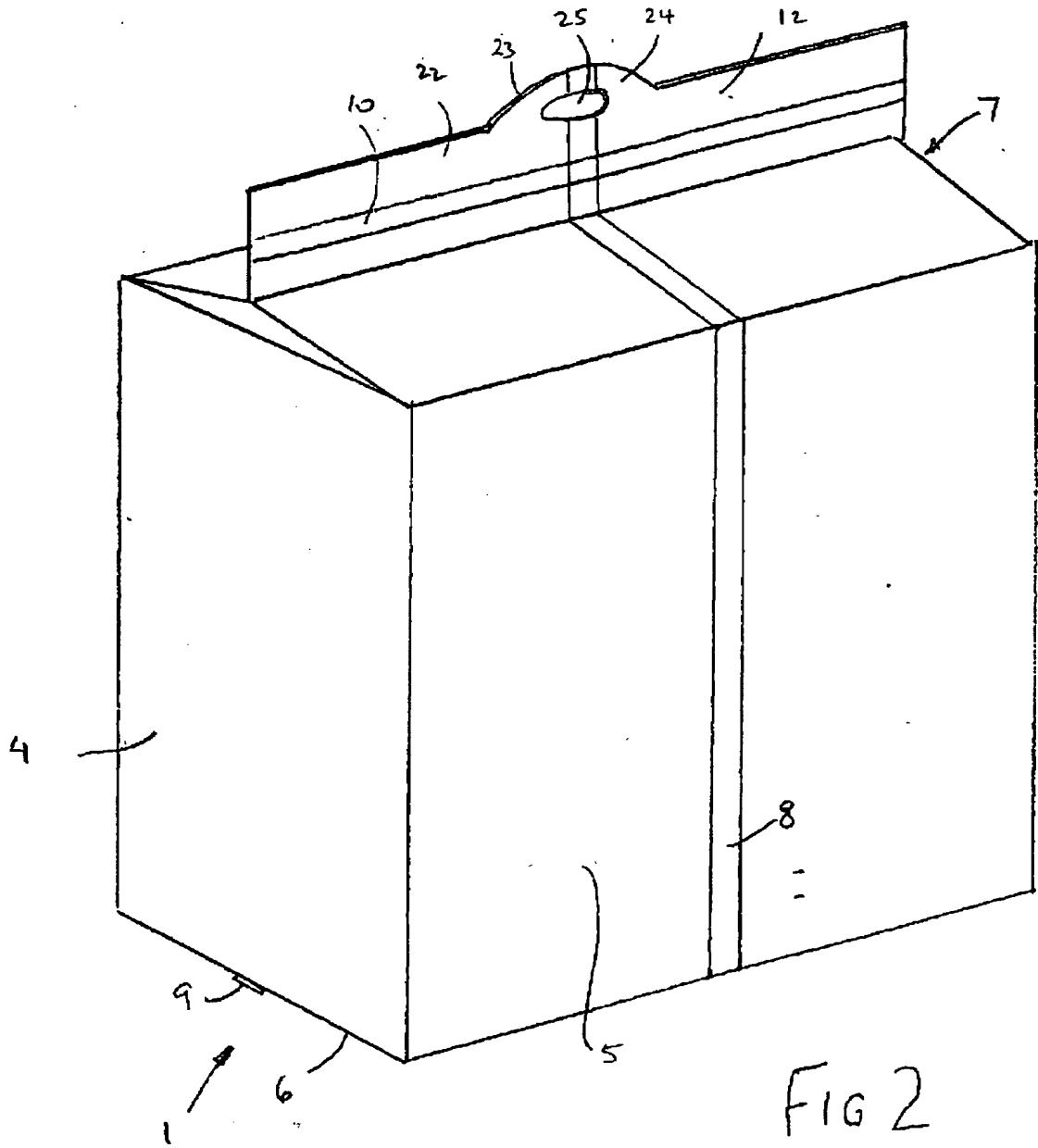


FIG. 1



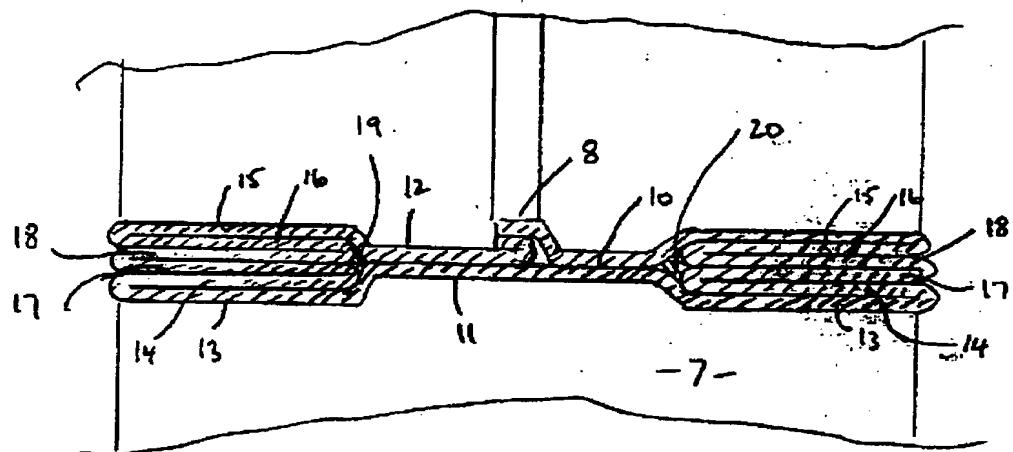


FIG. 3

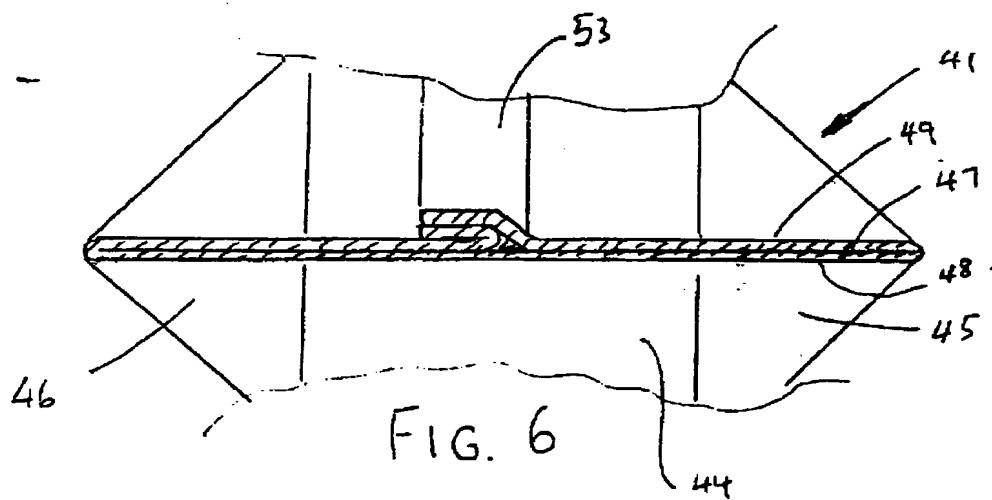


FIG. 6

EP 0 972 719 A1

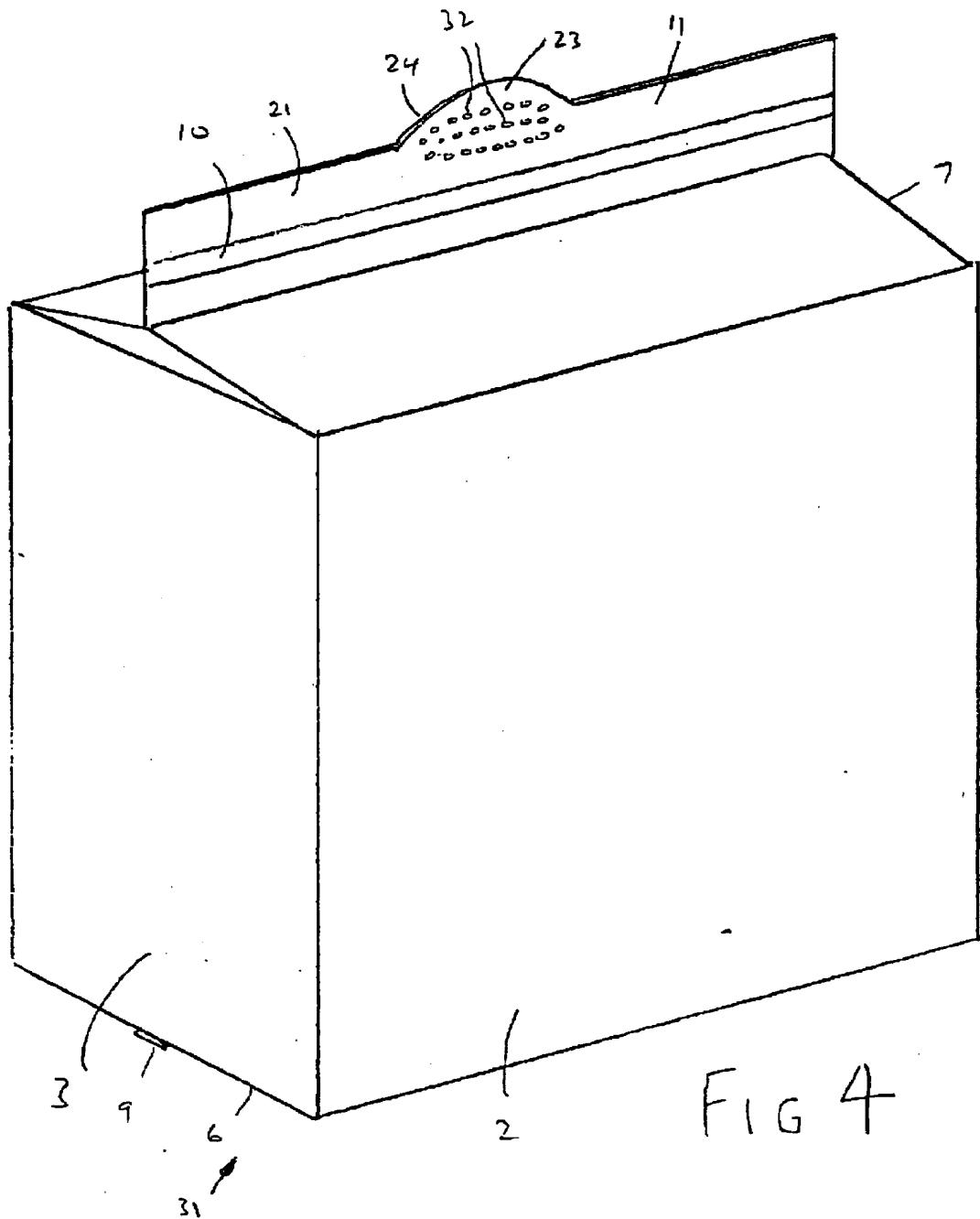


FIG 4

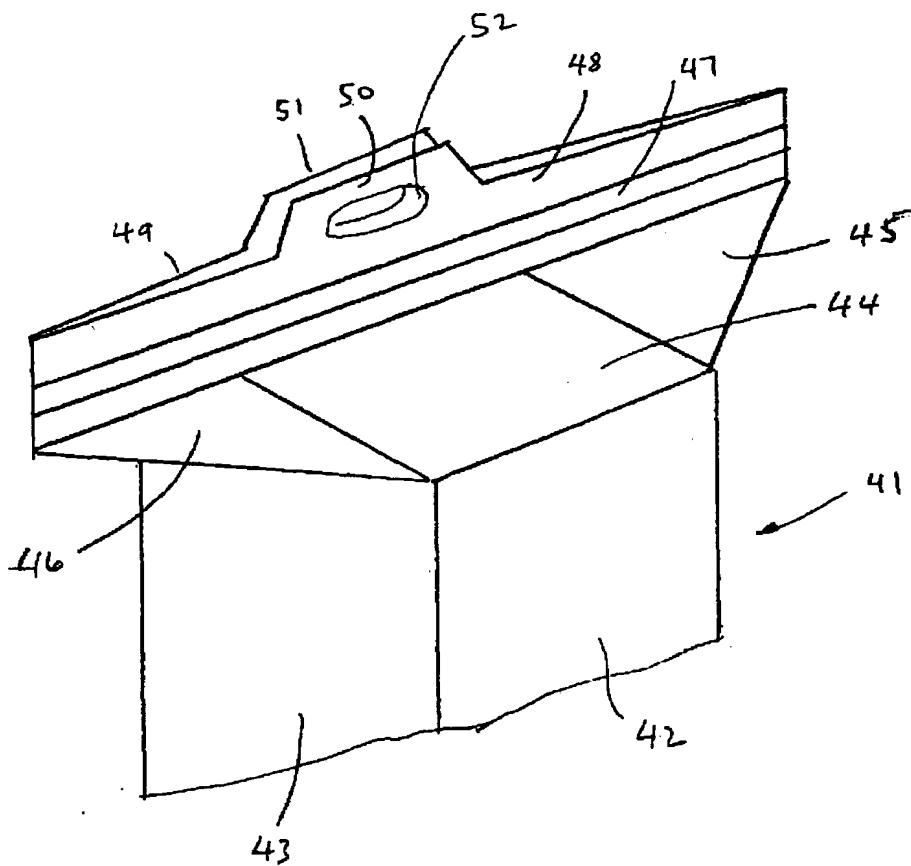


FIG 5

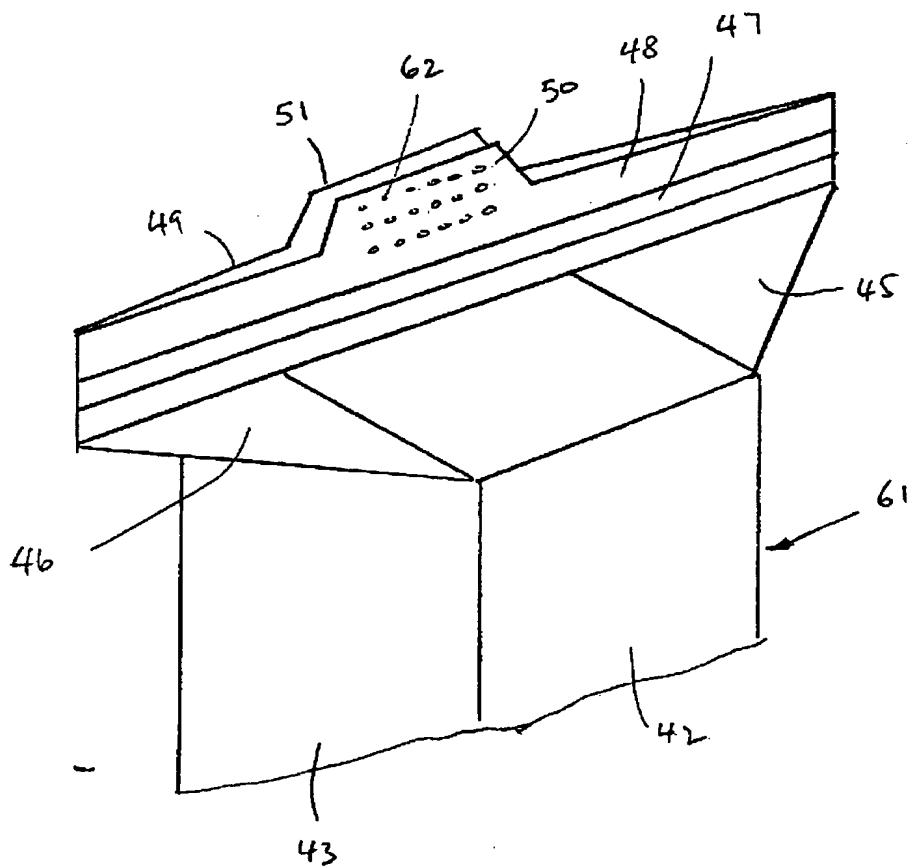
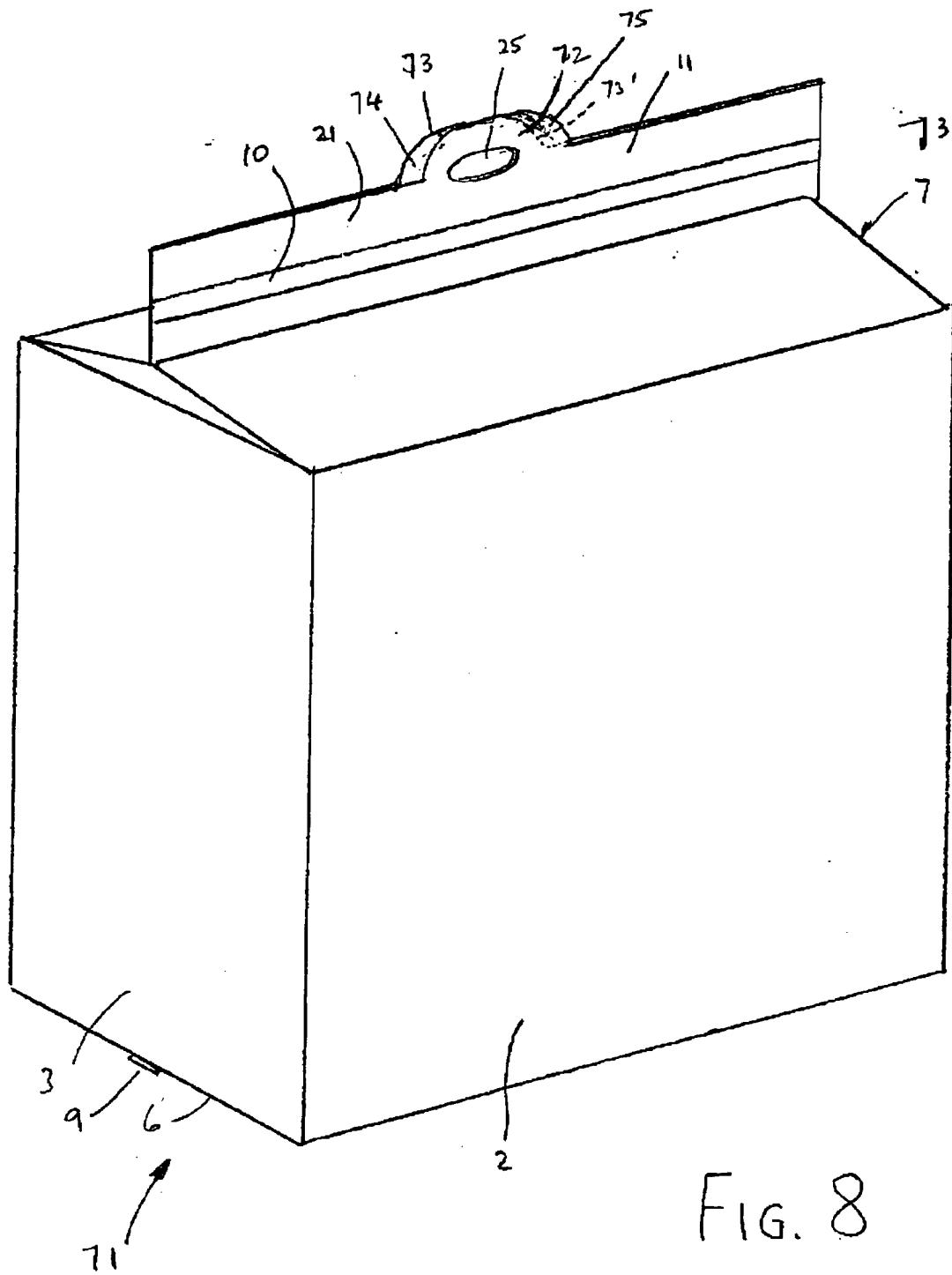
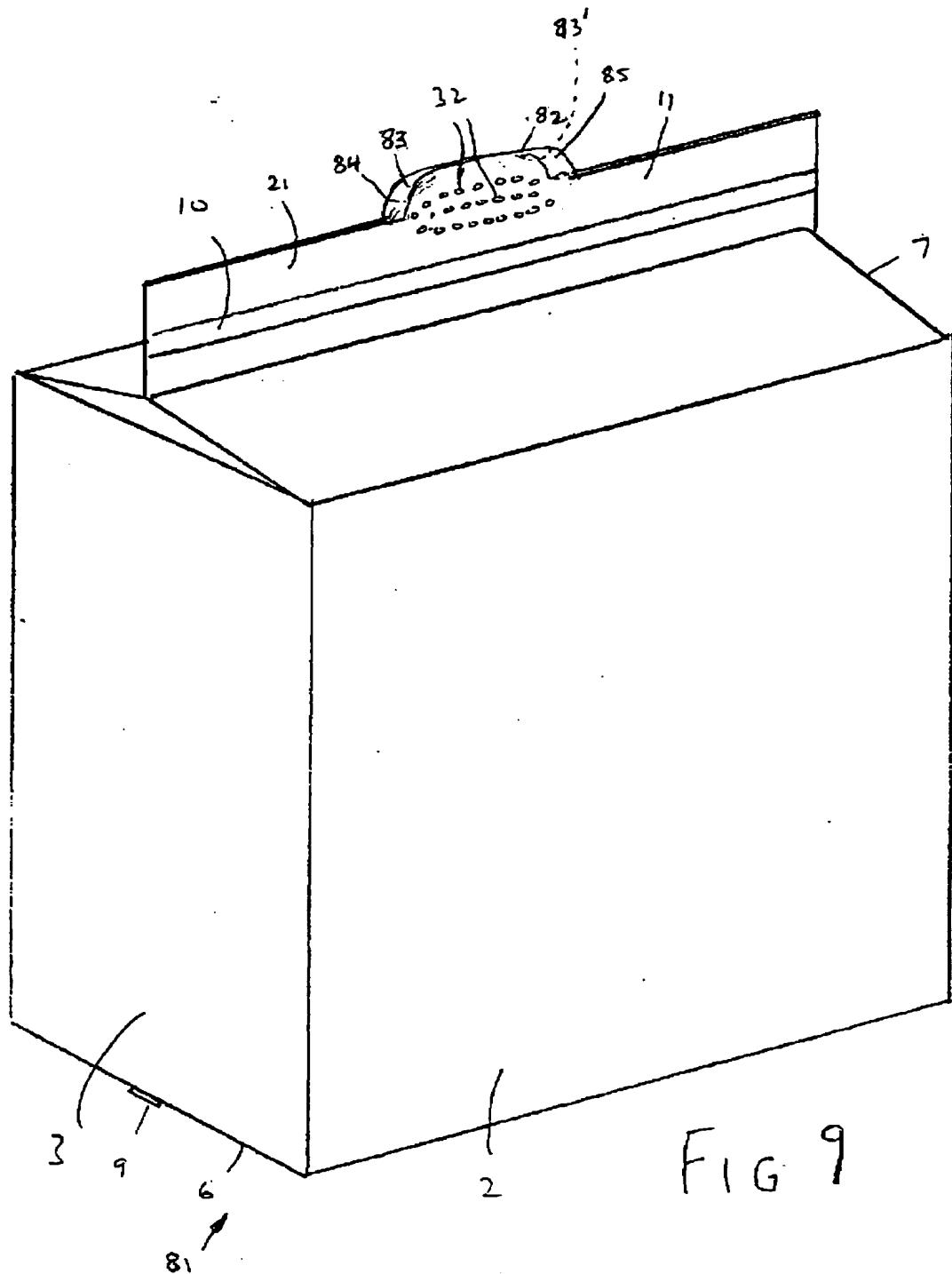


FIG. 7





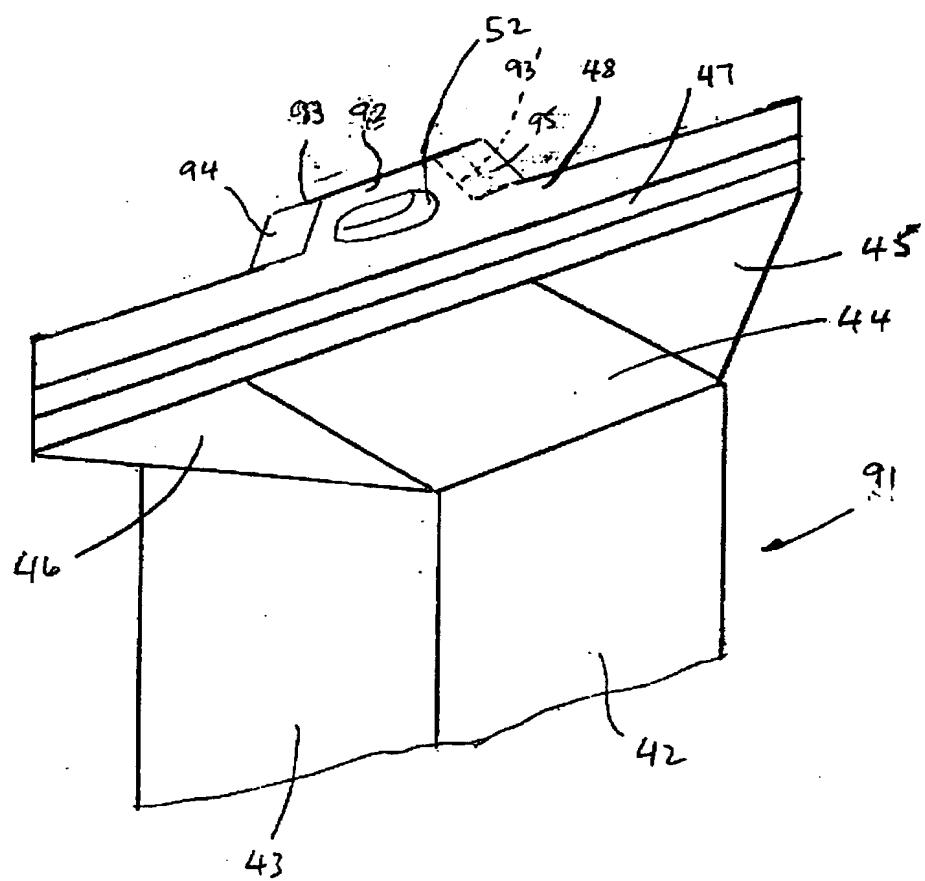


FIG 10

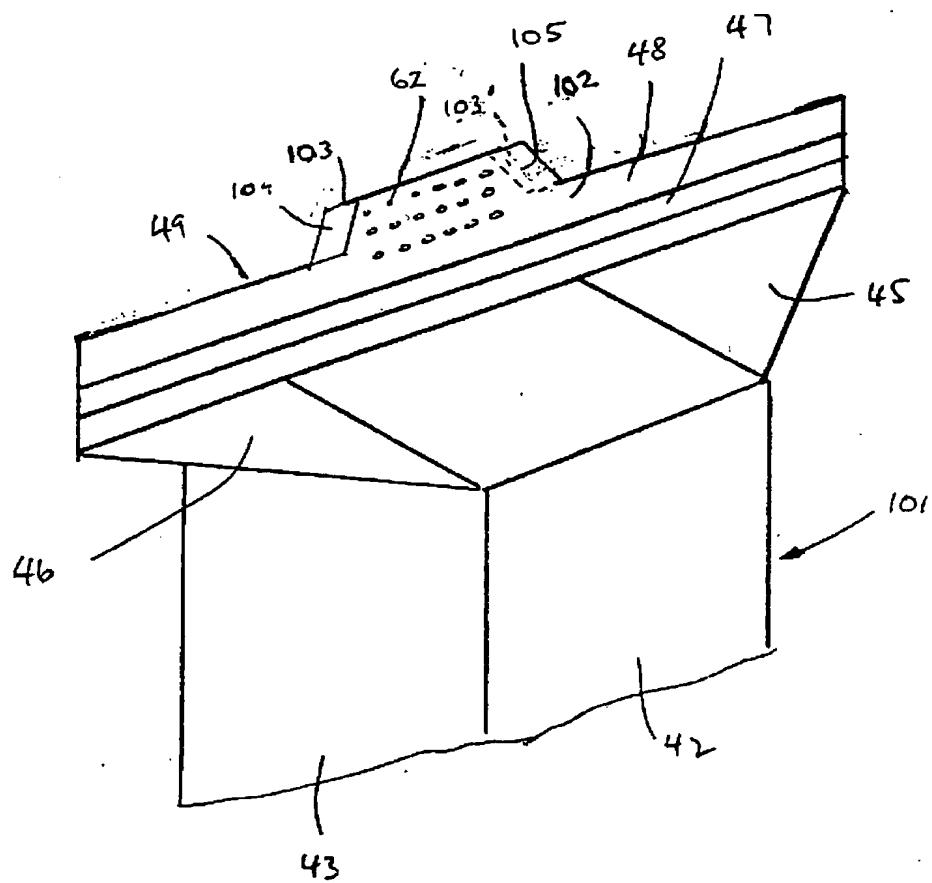


FIG. 11



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 98 30 5604

DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim			
X	US 5 385 251 A (DUNN STEVEN B) 31 January 1995	1,5-8	B65D75/58 B65D33/00		
Y	* column 1, line 25 - line 51 * * column 2, line 48 - column 3, line 24 * * figures 1-6 *	2-4,9,10			
Y	DE 94 831 C (JACK ROBERT) 3 January 1897 * page 1, line 18 - line 46 * * figure 2 *	2			
Y	US 5 706 961 A (MORANO EMANUEL P) 13 January 1998 * column 3, line 12 - line 45 * * column 5, line 16 - line 49 * * figures 1,8 *	3,4			
D,Y	US 5 352 466 A (DELONIS MICHAEL E) 4 October 1994	9			
A	* column 5, line 66 - column 6, line 17 * * figure 3 *	1			
Y	US 4 953 708 A (BEER JEFFREY S ET AL) 4 September 1990 * column 2, line 66 - column 3, line 13 * * figure 2 *	10	TECHNICAL FIELDS SEARCHED (Int.Cl.6) B65D		
The present search report has been drawn up for all claims					
Place of search	Date of completion of the search	Examiner			
THE HAGUE	3 December 1998	Papatheofrastou, M			
CATEGORY OF CITED DOCUMENTS					
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document					
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding documents					